

Claims:

- 1) A computer readable storage medium containing a program element for execution by a biller computing apparatus residing in a data network for implementing an electronic invoice management system, comprising:
 - a) an invoice generation unit operative for producing data files representative of invoices issued by a biller to respective customer entities;
 - b) a dispute resolution unit in communication with a dispute history data structure holding a plurality of groups of records, each record being descriptive of reasons a prior invoice produced by the invoice generation unit was disputed by a customer entity, each group of records being associated to a corresponding customer entity;
 - c) said dispute resolution unit being responsive to a message received from a first customer computing unit over the data network and representative of reasons to dispute a new invoice submitted by a given customer entity to:
 - i) locate the group of records in the dispute history data structure corresponding to the given customer entity;
 - ii) create a record from the message representative of reasons to dispute the new invoice from the given customer entity and store the created record in the dispute history data structure.
- 30 2) A computer readable storage medium as defined in claim 1, wherein said dispute resolution unit is operative to issue a message to the first customer computing unit to cause

generation at the first customer computing unit a dispute resolution interface.

3) A computer readable storage medium as defined in claim 2,
5 wherein said dispute resolution interface has a plurality
of predetermined choices that an operator at the first
customer computing unit can select, each choice being a
predetermined reason to dispute an invoice.

10 4) A computer readable storage medium as defined in claim 3,
wherein said dispute resolution interface has an editable
field in which the operator at the first customer
computing unit can enter a text message.

15 5) A computer readable storage medium as defined in claim 2,
wherein said dispute resolution unit is operative to issue
to a second customer computing unit a message to cause the
generation at the second customer computing unit of a
dispute resolution interface, the second computing unit
20 being associated to an operator of the given customer
entity.

6) A computer readable storage medium as defined in claim 5,
wherein said dispute resolution interface includes a field
25 displaying information about the new invoice disputed by
the given customer entity.

7) A computer readable storage medium as defined in claim 2,
wherein said dispute resolution unit is operative to issue
30 to a biller computing unit a message to cause the
generation at the biller computing unit of a biller

dispute resolution interface, the biller computing unit being associated to an operator of the biller.

8) A computer readable storage medium as defined in claim 7,
5 wherein said biller dispute resolution interface includes a field displaying information about the new invoice disputed by the given customer entity.

9) A computer readable storage medium as defined in claim 8,
10 wherein said biller dispute resolution interface includes a field linked to said dispute history data structure to display the group of records associated with the given customer entity.

15 10) A computer readable storage medium as defined in claim 9, wherein said biller dispute resolution interface includes a filter to perform a filtering function on the group of records associated with the given customer entity.

20 11) A computer readable storage medium as defined in claim 10, wherein said filter is modifiable allowing an operator at the biller computing unit to specify a filtering function to display only the records in the group of records associated with the given customer entity that match the filtering function.

12) A computer readable storage medium as defined in claim 11, wherein said biller dispute resolution interface includes an editable field in which the operator at the biller computing unit can enter a text string.

13) A computer readable storage medium as defined in claim 12, wherein said dispute resolution unit is operative to store in the dispute history data structure the text string entered at the biller computing unit, the text

5 string being stored in association with the record corresponding to the new invoice.

14) A computer readable storage medium as defined in claim 13, wherein said dispute resolution unit is operative to

10 issue to a customer computing unit a message to cause the generation at the customer computing unit of a dispute resolution interface, the computing unit being associated to an operator of the given customer entity, said dispute resolution interface including:

15 a) a first field displaying information about the new invoice disputed by the given customer entity;

b) a second field displaying information indicative of the text string entered at the biller computing unit.

20 15) An electronic invoice management system, comprising:

a) a biller machine;

b) a customer computing unit;

c) a data network interconnecting said biller machine to said customer computing unit;

25 d) said biller machine including:

i) an invoice generation unit operative for producing data files representative of invoices issued by a biller to respective customer entities;

30 ii) a dispute resolution unit in communication with a dispute history data structure holding a plurality of groups of records, each record being descriptive of reasons a prior invoice produced by the invoice

generation unit was disputed by a customer entity, each group of records being associated to a corresponding customer entity;

5 iii) said dispute resolution unit being responsive to a message received from said customer computing unit over said data network and representative of reasons to dispute an invoice submitted by a given customer entity to:

10 (1) locate the group of records in the dispute history data structure corresponding to the given customer entity;

15 (2) create a record from the message representative of reasons to dispute an invoice from the given customer entity and store the created record in the dispute history data structure.

20 16) A system as defined in claim 15, wherein said dispute resolution unit is operative to issue a message to said customer computing unit to cause generation at said customer computing unit a dispute resolution interface.

25 17) A system as defined in claim 16, wherein said dispute resolution interface has a plurality of predetermined choices that an operator at said customer computing unit can select, each choice being a predetermined reason to dispute an invoice.

30 18) A system as defined in claim 17, wherein said dispute resolution interface has an editable field in which the operator at said customer computing unit can enter a text message.

19) A system as defined in claim 16, said system further comprising a biller computing unit operatively connected to said biller machine, said dispute resolution unit being operative to issue to said biller computing unit a message to cause the generation at said biller computing unit of a biller dispute resolution interface.

5

20) A system as defined in claim 19, wherein said biller dispute resolution interface includes a field displaying information about the new invoice disputed by the given customer entity.

10

21) A system as defined in claim 20, wherein said biller dispute resolution interface includes a field linked to said dispute history data structure to display at said biller computing unit the group of records associated with the given customer entity.

15

20 22) A system as defined in claim 21, wherein said biller dispute resolution interface includes a filter to perform a filtering function on the group of records associated with the given customer entity.

25 23) A system as defined in claim 22, wherein said filter is modifiable allowing an operator at the biller computing unit to specify a filtering function to display only the records in the group of records associated with the given customer entity that match the filtering function.

30

24) A system as defined in claim 23, wherein said biller dispute resolution interface includes an editable field in

which the operator at the biller computing unit can enter a text string.

25) A system as defined in claim 24, wherein said dispute
5 resolution unit is operative to store in the dispute history data structure the text string entered at the biller computing unit, the text string being stored in association with the record corresponding to the new invoice.

10

26) A system as defined in claim 25, wherein said dispute resolution unit is operative to issue to said customer computing unit a message to cause the generation at said customer computing unit of a dispute resolution interface, said dispute resolution interface including:
15 a) a first field displaying information about the new invoice disputed by the given customer entity;
b) a second field displaying information indicative of the text string entered at the biller computing unit.

20

27) A method for electronic invoice management comprising:
a) generating at a biller machine data files representative of invoices issued by a biller to respective customer entities;
25 b) providing a data structure holding a plurality of groups of records, each record being descriptive of reasons a prior invoice generated at the biller machine was disputed by a customer entity, each group of records being associated to a corresponding customer entity;
30 c) in response to a message to the biller machine issued by a customer computing unit and representative of

reasons to dispute an invoice submitted by a given customer entity:

- i) locating in the data structure the group of records corresponding to the given customer entity;
- 5 ii) creating a record from the message representative of reasons to dispute an invoice from the given customer entity and storing the created record in the dispute history data structure.

10 28) A method as defined in claim 27, said method further comprising issuing a message to the customer computing unit to cause generation at the customer computing unit of a dispute resolution interface.

15 29) A method as defined in claim 28, wherein said dispute resolution interface has a plurality of predetermined choices that an operator at the customer computing unit can select, each choice being a predetermined reason to dispute an invoice.

20 30) A method as defined in claim 29, wherein said dispute resolution interface has an editable field in which the operator at the customer computing unit can enter a text message.

25 31) A method as defined in claim 28, said method further comprising issuing to a biller computing unit a message to cause the generation at the biller computing unit of a biller dispute resolution interface, the biller computing unit being associated to an operator of the biller.

30

32) A method as defined in claim 31, wherein said biller dispute resolution interface includes a field displaying information about the new invoice disputed by the given customer entity.

5

33) A method as defined in claim 32, wherein said biller dispute resolution interface includes a field linked to said dispute history data structure to display the group of records associated with the given customer entity.

10

34) A method as defined in claim 33, wherein said biller dispute resolution interface includes a filter to perform a filtering function on the group of records associated with the given customer entity.

15

35) A method as defined in claim 34, wherein said filter is modifiable allowing an operator at the biller computing unit to specify a filtering function to display only the records in the group of records associated with the given customer entity that match the filtering function.

20

36) A method as defined in claim 35, wherein said biller dispute resolution interface includes an editable field in which the operator at the biller computing unit can enter a text string.

25

37) A method as defined in claim 36, said method comprising storing in the dispute history data structure the text string entered at the biller computing unit in association with the record corresponding to the new invoice.

30

38) A method as defined in claim 37, said method further comprising issuing to a customer computing unit a message to cause the generation at the customer computing unit of a dispute resolution interface, said dispute resolution interface including:

- 5 a) a first field displaying information about the new invoice disputed by the given customer entity;
- b) a second field displaying information indicative of the text string entered at the biller computing unit.

10

39) An electronic invoice management system comprising:

- a) means for producing data files representative of invoices issued by a biller to respective customer entities;
- 15 b) dispute handling means in communication with a dispute history data structure holding a plurality of groups of records, each record being descriptive of reasons a prior invoice produced by the means for producing was disputed by a customer entity, each group of records being associated to a corresponding customer entity;
- 20 c) said dispute handling means being responsive to a message received from a first customer computing unit over the data network and representative of reasons to dispute a new invoice submitted by a given customer entity to:
 - i) locate the group of records in the dispute history data structure corresponding to the given customer entity;
 - ii) create a record from the message representative of reasons to dispute the new invoice from the given customer entity and store the created record in the dispute history data structure.

30